

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

79. (New) A method for scheduling transmissions of a plurality of mobile terminals in a mobile communication system, wherein each mobile terminal transmits data of at least one flow being mapped on a dedicated uplink channel to a base station, the method comprising:

receiving at the base station from a radio network controller Quality of Service (QoS) information of a plurality of flows to be multiplexed onto a single dedicated uplink channel by a mobile terminal,

receiving a scheduling request from at least one of the mobile terminals at the base station, wherein the scheduling request comprises an identifier identifying one of the plurality of flows, and

scheduling by the base station the transmissions of said mobile terminals based on the identifier and the QoS information related to the flow identified by the identifier.

80. (New) The method according to claim 79, wherein the flow is a logical channel mapped on the dedicated uplink channel and the identifier identifies the logical channel.

81. (New) The method according to claim 79, wherein the flow has a priority.

82. (New) The method according to claim 79, wherein the flow is multiplexed on a MAC-d flow.

83. (New) The method according to claim 79, wherein the QoS information comprises a transmission mode associated with the data of the flow.

84. (New) The method according to claim 5, wherein the transmission mode indicates whether data of the flow is transmitted applying an additional gain factor.

85. (New) The method according to claim 79, wherein the scheduling request further comprises information on a buffer occupancy at the mobile terminal and on a transmission power at the mobile terminal.

86. (New) The method according to claim 79, wherein the scheduling request received by the base station is transmitted via Medium Access Control (MAC) control signaling.

87. (New) The method according to claim 79, further comprising transmitting a scheduling assignment from the base station to at least one of the mobile terminals from which a scheduling request has been received at the base station, wherein the scheduling assignment indicates a link resource allocated to the mobile terminal on the dedicated uplink channel.

88. (New) The method according to claim 79, wherein the QoS information is received from a network element terminating the radio resource control signaling of at least one of the mobile terminals.

89. (New) The method according to claim 88, wherein the QoS information is included in a configuration message.

90. (New) The method according to claim 88, wherein the QoS information is received by the base station from the network element ;terminating the radio resource control signaling in a radio link setup message or a radio link reconfiguration message.

91. (New) The method according to claim 88, wherein the QoS information is received from a serving radio network controller.

92. (New) The method according to claim 79, wherein the flow is associated to at least one radio bearer between the mobile terminal and the network element terminating the radio resource control signaling and the method further comprises mapping QoS information of a radio bearer to the QoS information of the flow.

93. (New) The method according to claim 92, wherein the mapping of the QoS information comprises taking into account uplink delays on the interface between the base station and the network element terminating the radio resource control signaling.

94. (New) The method according to claim 79, wherein the flow is a MAC-d flow or a priority queue of the mobile terminal.

95. (New) The method according to claim 79, wherein the scheduling request comprises an identifier identifying the highest priority flow.

96. (New) The method according to claim 95, wherein the highest priority flow has the highest QoS demands.

97. (New) The method according to claim 79, wherein the QoS information comprises at least one of a transfer delay, a guaranteed bit rate, a traffic handling priority, a service type identification, a traffic class and a reordering release timer of the reordering buffer in the Medium Access Control (MAC) entity.

98. (New) The method according to claim 79, wherein the scheduling request further comprises a service type indicator indicating a transmission of data of the flow carrying a delay-critical service on the dedicated uplink channel.

99. (New) The method according to claim 79, further comprising considering a predetermined gain factor to be additionally applied to the transmission when scheduling the mobile terminal from which the scheduling request has been received at the base station.

100. (New) A base station for scheduling a plurality of transmissions of a plurality of mobile terminals in a mobile communication system, wherein each mobile terminal transmits data of at least one flow being mapped on a dedicated uplink channel to a base station, said base station comprising:

a communication section adapted to receive from a radio network controller Quality of Service (QoS) information of a plurality of flows to be multiplexed onto a single dedicated uplink channel by a mobile terminal, and for receiving a scheduling request from at least one of the mobile terminals, wherein the scheduling request comprises an identifier identifying one of the plurality of flows, and

a scheduling section adapted to schedule the transmissions of said mobile terminals based on the identifier and the QoS information related to the flow identified by the identifier.

101. (New) The base station according to claim 100, wherein the flow is a logical channel mapped on the dedicated uplink channel and the identifier identifies the logical channel.

102. (New) The base station according to claim 100, wherein the flow has a priority.

103. (New) The base station according to claim 100, wherein the flow is multiplexed on a MAC-d flow.

104. (New) The base station according to claim 100, wherein the scheduling request further comprises information on a buffer occupancy and on a transmission power at the mobile terminal.

105. (New) The base station according to claim 100, wherein the communication section is adapted to transmit a scheduling assignment to at least one of the mobile terminals from which

the scheduling request has been received, and the scheduling assignment indicates an uplink resource allocated to the dedicated uplink channel of the mobile terminal.

106. (New) The base station according to claim 100, wherein the QoS information is received from a network element terminating the radio resource control signaling of at least one of the mobile terminals.

107. (New) The base station according to claim 106, wherein the QoS information is included in a configuration message.

108. (New) The base station according to claim 106, wherein the QoS information is received from a serving radio network controller.

109. (New) The base station according to claim 100, wherein the scheduling request comprises an identifier identifying the highest priority flow.

110. (New) The base station according to claim 109, wherein the highest priority flow has the highest QoS demands.

111. (New) The base station according to claim 100, wherein the QoS information comprises at least one of a transfer delay, a guaranteed bit rate, a traffic handling priority, a service type identification, a traffic class and a reordering release timer of the reordering buffer in the Medium Access Control (MAC) entity.

112. (New) The base station according to claim 100, wherein the scheduling request further comprises a service type indicator indicating a transmission of data of the flow carrying a delay-critical service on the dedicated uplink channel.

113. (New) The base station according to claim 100, wherein the scheduling unit is adapted to consider a predetermined gain factor to be additionally applied to the transmission when scheduling the mobile terminal from which the scheduling request has been received.

114. (New) A method for transmitting data in a mobile communication system, the method comprising:

transmitting from a mobile terminal to a base station a scheduling request, wherein the scheduling request comprises a flow identifier identifying one of a plurality of flows to be multiplexed onto a single dedicated uplink channel, and wherein the flow identifier identifies Quality of Service (QoS) information related to the identified flow,

receiving at the mobile terminal from the base station a scheduling assignment considering the QoS information related to the identified flow,

multiplexing data of the plurality of flows to the dedicated uplink channel, and transmitting data according to the scheduling assignment.

115. (New) The method according to claim 114, further comprising receiving QoS information from a network element terminating the radio resource control signaling of the mobile terminal at the mobile terminal.

116. (New) A mobile terminal for transmitting data in a mobile communication system, the mobile terminal comprising:

a transmitting section operable to transmit to a base station a scheduling request, wherein the scheduling request comprises a flow identifier identifying one of a plurality of flows to be multiplexed onto a single dedicated uplink channel, and wherein the flow identifier identifies

Quality of Service (QoS) information related to the identified flow,

a receiving section operable to receive from the base station a scheduling assignment considering the QoS information related to the identified flow, and

a multiplexer operable to multiplex data of the plurality of flows to the dedicated uplink channel,

wherein the transmitting section is further operable to transmit data according to the scheduling assignment.

117. (New) The mobile terminal according to claim 116, wherein the receiving section is further operable to receive QoS information from a network element terminating the radio resource control signaling of the mobile terminal.

118. (New) A computer readable storage medium for storing instructions that when executed by a processor of a base station in a mobile communication system cause the base station to schedule transmissions by a plurality of mobile terminals, wherein each mobile terminal transmits data of at least one flow mapped on a dedicated uplink channel, by:

receiving QoS information at the base station from a radio network controller Quality of

Service (QoS) information of a plurality of flows to be multiplexed onto a single dedicated uplink channel by a mobile terminal,

receiving a scheduling request from at least one of the mobile terminals at the base station, wherein the scheduling request comprises an identifier identifying one of the plurality of flows, and

scheduling by the base station the transmissions of said mobile terminals based on the identifier and the QoS information related to the flow identified by the identifier.

119. (New) A computer readable storage medium for storing instructions that when executed by a processor cause a mobile terminal to transmit data in a mobile communication comprising system, by:

transmitting from the mobile terminal to a base station a scheduling request, wherein the scheduling request comprises a flow identifier identifying one of a plurality of flows to be multiplexed onto a single dedicated uplink channel, and wherein the flow identifier identifies Quality of Service (QoS) information related to the identified flow,

receiving at the mobile terminal from the base station a scheduling assignment from the base station, and considering the QoS information related to the identified flow,

multiplexing data of the plurality of flows to the dedicated uplink channel and transmitting data according to the scheduling assignment.